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More on Treatment Outcomes in Multidrug-Resistant Tuberculosis

James C.M. Brust, MD,

Albert Einstein College of Medicine, Bronx, NY

N. Sarita Shah, MD, MPH, and

US Centers for Disease Control and Prevention, Atlanta, GA

Neel R. Gandhi, MD

Rollins School of Public Health, Emory University, Atlanta, GA

In 2013, the WHO relaxed the definition of cure in MDR-TB treatment,¹ requiring only three negative cultures following the intensive phase instead of five.² Despite this, Günther et al. question the need for even 3 cultures to define successful treatment outcomes.³ Although sending mycobacterial cultures can be onerous and expensive, it pales in comparison to the actual costs of MDR-TB treatment (range: US\$10,000–200,000 versus culture: US\$1.63–62.01).^{4,5} The authors note that 11% of their participants who had culture-converted by 6 months later relapsed. This rate might have been higher or detected sooner, had cultures been sent more regularly, as recently demonstrated in 5410 MDR-TB patients from 10 countries.⁵ Late detection of treatment failure increases the risk of amplified resistance and further transmission.

We believe that increasing lab capacity—especially in high-TB prevalence countries—would be more effective in detecting drug-resistant TB cases and managing treatment response. Rapid alternatives to culture, such as Gene Xpert[®], should also be evaluated, but until such studies are done, we believe that monitoring of therapy for MDR-TB should be more, not *less* stringent.

References

1. World Health Organization. Definitions and reporting framework for tuberculosis --2013 revision. Geneva: WHO/HTM/TB/20132; 2013.
2. Laserson KF, Thorpe LE, Leimane V, et al. Speaking the same language: treatment outcome definitions for multidrug-resistant tuberculosis. *Int J Tuberc Lung Dis.* 2005; 9:640–5. [PubMed: 15971391]
3. Gunther G, Lange C, Alexandru S, et al. Treatment Outcomes in Multidrug-Resistant Tuberculosis. *N Engl J Med.* 2016; 375:1103–5. [PubMed: 27626539]
4. Lu C, Liu Q, Sarma A, Fitzpatrick C, Falzon D, Mitnick CD. A systematic review of reported cost for smear and culture tests during multidrug-resistant tuberculosis treatment. *PLoS One.* 2013; 8:e56074. [PubMed: 23457502]
5. Mitnick CD, White RA, Lu C, et al. Multidrug-resistant tuberculosis treatment failure detection depends on monitoring interval and microbiological method. *Eur Respir J.* 2016